



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/936,484	12/06/2001	Shuji Arakawa	VX012358 PCT	4422
21369	7590	04/20/2005	EXAMINER	
VARNDELL & VARNDELL, PLLC 106-A S. COLUMBUS ST. ALEXANDRIA, VA 22314			PEREZ, JULIO R	
			ART UNIT	PAPER NUMBER
			2681	
DATE MAILED: 04/20/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	09/936,484		ARAKAWA ET AL.	
	Examiner		Art Unit	
	Julio R Perez		2681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15, -16, 18-23, 25-28, 30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 27 and 28 is/are allowed.
- 6) ☒ Claim(s) 15, 16, 18-23, 25, 26 and 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

1. Applicant's arguments filed 10/21/04 have been fully considered but they are not persuasive.

In response to applicant's argument that matter of the applicant's claimed invention, which is directed to a communication device that communicates with other devices and construction machines and is provided within the construction machine, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963).

Sutherland and DiLullo teach a truck (Fig. 1), which can be used in a construction environment. Therefore, a construction machine as claimed. The claim language does not uniquely and distinctively define the claimed construction machine from the prior art.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 15, 20, 23, 25, 26 are rejected under 35 U.S.C. 102(b) as being unpatentable over Sutherland (5068656).

Regarding claim 15, Sutherland discloses a communication device of a construction machine for communicating between the construction machine and a terminal device, which comprises: a communication device, which enables communications with said terminal device when an electrical connection to a power source is ON, and location detecting means for detecting the location of said construction machine are provided in said construction machine (col. 1, lines 63-67; col. 2, lines 4-32, 43-54; col. 3, lines 12-40, the truck is comprised with an on-board device to communicate with a terminal within the dispatch station; and further includes a satellite location system for position determining the location of the truck); means for turning ON an electrical connection between said power source and said communication device when the engine of said construction machine is stopped, is provided in said construction machine (col. 3, lines 41-67, power supply is available for the communication apparatus from the truck voltage assembly); and a time at which the electrical connection between said power source and said communication device is turned ON is increased when the location of said construction machine detected by said location detecting means strays from a normal location or approaches an abnormal area (col. 2, lines 43-54; col. 3, lines 17-40; col. 5, lines 20-53, the vehicle is displacing from one place to another as its location is being determined as the time is running).

Regarding claim 20, Sutherland discloses a communication device of a construction machine constituted such that a construction machine and a terminal

Art Unit: 2681

device are connected by communication means enabling mutual transmission and reception, and, in accordance with an input operation performed at said terminal device of requesting construction machine information related to the construction machine, a content of a request is sent to the construction machine, and the construction machine, which receives the request content, acquires, via a construction machine, construction machine information corresponding to the request content and sends the acquired construction machine information to said terminal device (col. 1, lines 63-67; col. 2, lines 4-32, 43-54; col. 3, lines 12-40, the truck is comprised with an on-board device to communicate with a terminal within the dispatch station; and further includes a satellite location system for position determining the location of the truck);, which comprises: detecting means for detecting a location of said construction machine being provided in said construction machine, and when the location detected by said detecting means changes, the construction machine information is sent to said terminal device from said construction machine (col. 1, lines 66-67; col. 2, lines 4-54, the out of position of the truck, which is moving along roads, is reported to central dispatcher, which comprises a terminal, and further receives the location of the truck as the truck is moving).

Regarding claim 23, Sutherland discloses a communication device of a construction machine constituted such that a construction machine and a terminal device are connected by communication means enabling mutual transmission and reception, and, in accordance with an input operation performed at said terminal device of requesting construction machine information related to the construction machine, a content of a request is sent to the construction machine, and the construction machine,

Art Unit: 2681

which receives the request content, acquires, via a construction machine, construction machine information corresponding to the request content and sends the acquired construction machine information to said terminal device (col. 1, lines 63-67; col. 2, lines 4-32, 43-54; col. 3, lines 12-40, the truck is comprised with an on-board locating device to communicate with a terminal within the dispatch station; and further includes a satellite location system for position determining the location of the truck, which comprises: detecting means for detecting a location of said construction machine is provided in said construction machine, and the location information of said construction machine is sent to said terminal device from said construction machine when a content of construction machine-related data to be sent this time differs from a content of construction machine-related data sent at a previous time (col. 1, lines 66-67; col. 2, lines 4-54, the out of position of the truck, which is moving along roads, is reported to central dispatcher, which comprises a terminal, and further receives the location of the truck as the truck is moving, as time passes).

Regarding claim 25, Sutherland discloses a communication device of a construction machine for communicating between a plurality of construction machines and a terminal device, which comprises: one or more business offices at/from which said plurality of construction machines are stored/dispatched (col. 2, lines 9-12, 43-54; col. 3, lines 12-16), and one or more work sites at which said plurality of construction machines are operated, are established col. 2, lines 9-12; col. 3, lines 12-16); location detecting means for detecting a location of said construction machine is provided in each construction machine (col. 3, lines 17-40, the trailer comprises a location detection

Art Unit: 2681

device to provide location of the trailer); based on the detection result of said location detecting means and location data for said business office and work site, when said construction machine enters said business office or work site, data stating that this construction machine has entered this business office or work site is sent to said terminal device from this construction machine, and when said construction machine exits from said business office or work site, data stating that this construction machine has exited this business office or work site is sent to said terminal device from this construction machine (col. 3, lines 12-67; col. 4, lines 1-9); and, based on said sent data, data on the entry/exit of said plurality of construction machines to/from said business office or work site is managed by said terminal device (col. 2, lines 9-54; col. 3, lines 12-67; col. 5, lines 20-53).

Regarding claim 26, Sutherland discloses, the communication device of a construction machine, wherein, when said construction machine exits from said business office or work site, location data is sent to said terminal device from said construction machine each time said construction machine moves a predetermined distance, and, based on said sent location data, data on a movement history of said construction machine is managed by said terminal device (col. 1, lines 66-68; col. 2, lines 1-54; col. 3, lines 12-40).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 16, 22, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over DiLullo et al. in view of Berard et al. (5515043).

Regarding claim 16, DiLullo et al. disclose a communication device of a construction machine for communicating between the construction machine and a terminal device, which comprises: a communication device, which enables communications with said terminal device when an electrical connection to a power source is ON, and travel speed computing means for computing a travel speed of said construction machine are provided in said construction machine (col. 5, lines 33-55; col. 66, lines 43-52, a mobile satellite transmitter is provided to communicate with a central station); and a time at which the electrical connection between said power source and said communication device is turned ON is increased when the travel speed of said construction machine computed by said travel speed computing means increases (col. 5, lines 33-55; col. 66, lines 43-52, the vehicle is displacing from one place to another, and its speed increments, as its location is being determined as the time is running).

DiLullo et al. do not explicitly disclose means for turning ON the electrical connection between said power source and said communication device when the engine of said construction machine is stopped provided in said construction machine.

However, the preceding limitation is well known in the art of telecommunications.

Berard et al. teach a vehicle locating system that enables the user to remotely access vehicle information, and is supplied with power while the vehicle battery power is OFF (col. 5, lines 35-42).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the communication system as taught by DiLullo by implementing the system with battery switching circuitry because it would provide DiLullo's system with the enhanced capability of keeping the communication device functioning while the vehicle power is OFF and therefore providing a more secure and efficient connection.

Regarding claim 22, DiLullo et al. disclose a communication device of a construction machine constituted such that a construction machine and a terminal device are connected by communication means enabling mutual transmission and reception, and, in accordance with an input operation performed at said terminal device of requesting construction machine information related to the construction machine, a content of a request is sent to the construction machine, and the construction machine, which receives the request content acquires, via a construction machine, construction machine information corresponding to the request content and sends the acquired construction machine information to said terminal device (col. 5, lines 33-55; col. 66, lines 43-52, a mobile satellite transmitter, within the truck, is provided to communicate location information to a central station).

DiLullo et al. do not explicitly disclose detecting means for detecting a drop in voltage of a power source mounted to said construction machine is provided in said construction machine, and when the voltage of said power source detected by said detecting means drops below a specified value, the construction machine information is sent to said terminal device from said construction machine.

However, the preceding limitation is well known in the art of telecommunications.

Berard et al. teach a vehicle locating system, provided within the vehicle and power by power supply from the vehicle battery, that enables the user to remotely access vehicle information, and is supplied with power while the vehicle battery power is low or OFF (col. 5, lines 35-42).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the communication system as taught by DiLullo by implementing the system with battery switching circuitry because it would provide DiLullo's system with the enhanced capability of keeping the communication device functioning while the vehicle power is below certain amount or when the power of the vehicle is OFF and therefore providing a more secure and efficient connection.

Regarding claim 30, DiLullo et al. disclose a communication device of a vehicle for communicating between a plurality of vehicle and a terminal device, which comprises: a communication device enabling communications with said terminal device when an electrical connection to a power source is turned ON is provided in said plurality of construction machines (col. 5, lines 33-55; col. 66, lines 43-52, a mobile satellite transmitter, within the cargo truck, is provided to communicate with a central

Art Unit: 2681

station), each of said plurality of construction machines changes said period in accordance with change data sent to said construction machine from said terminal device (col. 5, lines 33-55; col. 66, lines 43-52, the vehicle is displacing from one place to another, and its speed increments, as its location is being determined as the time is passes by).

DiLullo et al. do not explicitly disclose means for turning ON at a predetermined period the electrical connection between said power source and said communication device when an engine of its own construction machine is stopped, is, provided in said plurality of construction machines.

However, the preceding limitation is well known in the art of telecommunications.

Berard et al. teach a vehicle locating system, provided within the vehicle and power by power supply from the vehicle battery, that enables the user to remotely access vehicle information, and is supplied with power while the vehicle battery power is low or OFF (col. 5, lines 35-42).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the communication system as taught by DiLullo by implementing the system with battery switching circuitry because it would provide DiLullo's system with the enhanced capability of keeping the communication device functioning while the vehicle power is below certain amount or when the power of the vehicle is OFF and therefore providing a more secure and efficient connection.

6. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over DiLullo et al. in view of Abe (575830).

Regarding claim 18, DiLullo et al. disclose a communication device of a mobile unit constituted such that a mobile unit and a terminal device are connected by communication means enabling mutual transmission and reception, and, in accordance with an input operation performed at said terminal device of requesting mobile unit information related to the mobile unit, a content of a request is sent to the mobile unit, and the mobile unit, which receives the request content, acquires, via a mobile unit, mobile unit information corresponding to the request content and sends the acquired mobile unit information to said terminal device.

DiLullo et al. do not explicitly disclose detecting means for detecting a fact that an engine of said mobile unit has been started being provided in said mobile unit, and when said detecting means detects that said engine is started, the specified mobile unit information is sent to said terminal device from said mobile unit.

Abe teaches a diagnosing apparatus and an external computer to read data from an electronic control device of a vehicle and further sends the information to the external PC (col. 2, lines 47-67; col. 3, lines 65-67; col. 4, lines 1-16; col. 5, lines 10-36; col. 8, lines 57-64).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the communication system as taught by DiLullo by implementing the system with means to detect operation of the vehicle motor because it would provide DiLullo's system with the enhanced capability of connecting a device to the vehicular controller as to verify input and output signals thereto.

7. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over DiLullo et al. in view of Parrillo (5442553).

Regarding claim 19, DiLullo et al. disclose a communication device of a mobile unit constituted such that a mobile unit and a terminal device are connected by communication means enabling mutual transmission and reception, and, in accordance with an input operation performed at said terminal device of requesting mobile unit information related to the mobile unit, a content of a request is sent to the mobile unit, and the mobile unit, which receives the request content, acquires, via a mobile unit, mobile unit information corresponding to the request content and sends the acquired mobile unit information to said terminal device, which comprises.

DiLullo et al. do not explicitly disclose totaling means for totaling engine operating hours of said mobile unit being provided in said mobile unit, and when a cumulative value of said engine operating hours totaled by said totaling means either reaches a specified value, or increases by a specified quantity, the specified mobile unit information is sent to said terminal device from said mobile unit.

Parrillo teaches the diagnosis and repair of mobile and motionless vehicles in order to repair, diagnose, and upgrade the system of vehicles (col. 1, lines 39-62; col. 2, lines 32-65; col. 3, lines 50-53).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the communication system as taught by DiLullo by implementing the system with means to diagnose the vehicle system in order to provide information in relation to its functioning.

8. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over DiLullo et al. in view of Wortham (5299132).

Regarding claim 21, DiLullo et al. disclose a communication device of a mobile unit constituted such that a mobile unit and a terminal device are connect by communication means enabling mutual transmission and reception, and, in accordance with an input operation performed at said terminal device of requesting mobile unit information related to the mobile unit, a content of a request is sent to the mobile unit, and the mobile unit, which receives the request content, acquires, via a mobile unit, mobile unit information corresponding to the request content and sends the acquired mobile unit information to said terminal device.

DiLullo et al. do not explicitly disclose detecting means for detecting a relative location of said, mobile unit in relation to a set range being provided in-said mobile unit, and when the relative location of said mobile unit in relation to the set range constitutes a specified relative location, the specified mobile unit information is sent to said terminal device from said mobile unit.

Wortham teaches a method and apparatus for locating and communicating with vehicles that includes a mobile cellular unit within the vehicle to obtain location information and transmit to host controller, when the vehicle within certain distances (col. 1, lines 49-67; col. 2, lines 37-67; col. 5, lines 37-59).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the communication system as taught by Wortham by implementing the system with means to detect the location related to the

Art Unit: 2681

vehicle when within its working environment because it would provide the system with means to determine the exact and accurate location of the vehicle in order to provide the information to the host controller.

Allowable Subject Matter

9. Claims 27, 28 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: Prior art has not been found that suggests or renders obvious the limitations of independent claims 27 and 28.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julio R Perez whose telephone number is (703) 305-8637. The examiner can normally be reached on 7:00 - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on 703-306-0003. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2681

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



4/3/05


NIKA A. GARY
PRIMARY EXAMINEE